What is claimed is:

1. A Pseudo-BJT based retinal focal-plane sensing system, which mimics the three cell functions of P cell, H cell and B cell in a single pixel, and performs image sensing effect, comprising:

5   a row decoder, used for detecting external images, randomly selecting desired pixel and generating a row address;

        a column decoder, used for detecting external images, randomly selecting desired pixel and generating a column address;

        a pixel array module, used for reading pixels and detecting external images;

10   in addition, outputting pixel voltages appointed by the row decoder and the column decoder one by one; wherein a voltage is generated when an image signal is received by the row address and the column address;

        a data buffer, used for converting the parallel data to serial data in order to reduce output pins of the chip;

15   a circuit for current hysteresis, used for eliminating noise disturbance and adjusted adaptively according to the value of induced photocurrent, which enhances noise immunity and eliminate noise disturbance; and

        a resistance circuit, having the function of Low-Pass Filter enabling high frequency noise to be eliminated with high tunable capability.

20   2 · The Pseudo-BJT based retinal focal-plane sensing system of claim 1, wherein the P cell is to do photo-input sensing lacking the function of eliminating noise disturbance.

        3 · The Pseudo-BJT based retinal focal-plane sensing system of claim 1, wherein the H cell is to smooth an image retrieved by P cell with the Low-Pass Filter

25   function enabling partial high frequent noise to be eliminated.

4 · The Pseudo-BJT based retinal focal-plane sensing system of claim 1, wherein the B cell is to balance both outputs of P cell and H cell to attain edge detection and have the function of eliminating noise disturbance.

5 · The Pseudo-BJT based retinal focal-plane sensing system of claim 1, wherein the Pixel Array Module can be a 32x32 pixel array.

6 · The Pseudo-BJT based retinal focal-plane sensing system of claim 1, wherein the retinal focal-plane sensor adopts MOSFET transistors.

7 · The Pseudo-BJT based retinal focal-plane sensing system of claim 1, being applied to image recognition, image tracing, robot vision, optical image detecting circuits of bar-code or character readers.

8 · The Pseudo-BJT based retinal focal-plane sensing system of claim 1, wherein the circuit for current hysteresis is an adaptive current Schmitt trigger.

9 · The Pseudo-BJT based retinal focal-plane sensing system of claim 1, wherein the resistance circuit is a smoothing network circuit.

10 · A Pseudo-BJT retinal focal-plane circuit, comprising a Photodiode D0, two Pseudo-BJTs, four adjustable N-channel MOS resistors of the smoothing network as Ms1- Ms4, a set of adaptive current Schmitt trigger comprising Mnf1-Mnf2 and Mpf1-Mpf2, an Inverter comprising transistors Mn and Mp, row and column controlled switch transistors, Pseudo-BJT P cells comprising Mp1 and Mp2, and Pseudo-BJT H cells comprising Mn1 and Mn2;

wherein the Photodiode D0 is detected and photocurrent is then generated, incorporating Mp1 and MP2 for the P cell to process;

Mn1 and Mn2(H cell) are used for incorporating with smoothing network, Ms1-Ms4 to activate the image smoothing function; the electric resistance of four MOS resistors is controlled by the gate voltage Vsmooth(VF) with the Low-Pass

Filter function enabling partial high frequent noise to be eliminated;

Mp2 and Mn2 have the connection between thereof activating the B cell

functions; the adaptive current Schmitt trigger is composed of Mnf1-Mnf2

and Mpf1-Mpf2 for eliminating noise disturbance;

5   an outputted Inverter converts analogue signals into digital signals; and

the Row and Column controlled switch transistors are controlled by the Row

and Column Decoders, thereby only appointed pixels are able to output

signals (Retina_out).

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